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FOR KARNATAKA CLASS 10 PREPARATION

Karnataka SSLC Model Question Paper 2027 for Programming In ANSI C (Paper 2) Key Answers

EXAM	YEAR	TYPE
Karnataka Class 10	2027	Answer Key

ಕರ್ನಾಟಕ ಶಾಲಾ ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯನಿರ್ಣಯ ಮಂಡಲಿ

6ನೇ ಅಡ್ಡ ರಸ್ತೆ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು – 560 003

KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD

6th Cross, Malleshwaram, Bengaluru – 560 003

2026 – 27 ರ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ – 2 ರ ಮಾದರಿ ಉತ್ತರಗಳು

2026 – 27 MODEL ANSWER FOR PAPER - 2

ವಿಷಯ :ಪ್ರೋಗ್ರಾಮಿಂಗ್ ಇನ್ ಎ ಎನ್ ಎಸ್ ಐ "ಸಿ"

Subject : PROGRAMMING IN ANSI C

ವಿಷಯ ಸಂಕೇತ : 54 **ಗರಿಷ್ಠ ಅಂಕಗಳು : 80**

SUBJECT CODE NO. : 54 **MAXIMUM MARKS Marks: 80**

Qn. Nos.	Value Points	Total
I	**Four alternatives are given for each of the following questions / incomplete statements. Select the most appropriate alternative and write it in the answer book along with its alphabet.**	
1	**Which of the following is used to represent a single character in C?** (A) String (B) Character (C) Integer (D) Float **Ans:** (B) Character	1
2	**Which symbol is used to begin a single-line comment in C?** (A) /* (B) // (C) ## (D) – **Ans:** (B) //	1
3	**Which of the following is a valid identifier in C?** (A) 2number (B) total-mark (C) total_marks (D) float **Ans:** (C) total_marks	1

4	**Which format specifier is used to read an integer value?** (A) %c (B) %f (C) %d (D) %s **Ans:** (C) %d	1
5	**Which operator is used to find the remainder after division?** (A) / (B) % (C) // (D) : **Ans:** (B) %	1
6	**Which function is used to display output on the screen?** (A) scanf() (B) getchar() (C) printf() (D) putchar() **Ans:** (C) printf()	1
7	**Which statement is used to terminate a loop immediately?** (A) continue (B) break (C) exit (D) stop **Ans:** (B) break	1
8	**Which escape sequence is used to move the cursor to the next line?** (A) \t (B) \b (C) \n (D) \r **Ans:** (C) \n	1
9	**Which of the following is a relational operator?** (A) + (B) && (C) >= (D) = **Ans:** (C) >=	1
10	**Which operator represents logical OR in C?** (A) | (B) || (C) && (D) ! **Ans:** (B) ||	1

II	**Answer all the questions.**	
11		
A)	Mention any two features of C language. **Ans:** 1. Simple and efficient: C has a simple syntax and provides efficient execution. 2. Portable: C programs can be transferred and compiled on different computer systems with little modification.	**2**
B)	Explain the different types of C variables. **Ans:** 1. Local variable – Declared inside a function or block and accessible only within that block. 2. Global variable – Declared outside all functions and can be accessed by multiple functions. 3. Static variable – Retains its value throughout the execution of the program.	**3**
C)	Explain the basic structure of a C program with a suitable example **Ans:** The basic structure consists of documentation/comments, preprocessor directives, global declarations, the main() function, variable declarations, executable statements, and user-defined functions if required. Example: #include <stdio.h> int main() { int a, b, sum; a = 10; b = 20; sum = a + b; printf("Sum = %d", sum); return 0; }	**5**

12		
A)	Define a variable. **Ans:** A variable is a named memory location used to store a value that can be changed during the execution of a program.	**2**
B)	Explain the rules for naming identifiers in C. **Ans:** 1. An identifier can contain letters, digits and underscore (_). 2. It must not begin with a digit. 3. Keywords cannot be used as identifiers. 4. Spaces and special symbols are not allowed. 5. C identifiers are case-sensitive.	**3**
C)	Explain the different types of constants used in C language with examples **Ans:** 1. Integer constants – Whole numbers, e.g. 10, 25, -50. 2. Floating-point constants – Decimal values, e.g. 3.14, 25.5. 3. Character constants – A single character in single quotes, e.g. 'A', '5'. 4. String constants – A sequence of characters in double quotes, e.g. "Hello". 5. Symbolic constants – Defined using #define, e.g. #define PI 3.14.	**5**
13		
A)	Define C tokens. **Ans:** C tokens are the smallest individual units of a C program that are meaningful to the compiler. Examples include keywords, identifiers, constants, strings, operators and special symbols.	**2**
B)	Explain any three types of operators in C. **Ans:** 1. Arithmetic operators – Used for mathematical calculations: +, -, *, /, %. 2. Relational operators – Used to compare values: <, >, <=, >=, ==, != 3. Logical operators – Used to combine conditions: &&, ||, !.	**3**

C)	Explain the basic data types in C language with their uses. **Ans:** char – Stores a character; example: char grade = 'A'; int – Stores integer values; example: int age = 20; float – Stores decimal values; example: float price = 25.5; double – Stores double-precision decimal values; example: double d = 123.456; void – Represents no value; example: void display();	**5**
14		
A)	Explain the if-else statement. **Ans:** The if-else statement is a decision-making statement used to execute one block when a condition is true and another block when the condition is false. Syntax: `if(condition)` `{` `  statements;` `}` `else` `{` `  statements;` `}`	**2**
B)	Write a C program to find the largest of two numbers. **Ans:** `#include <stdio.h>` `int main()` `{` `  int a, b;` `  printf("Enter two numbers: ");` `  scanf("%d%d", &a, &b);` `  if(a > b)` `  printf("%d is the largest", a);` `  else if(b > a)` `  printf("%d is the largest", b);` `  else` `  printf("Both numbers are equal");` `  return 0;` `}`	**8**

15		
A)	Explain the use of scanf() function. **Ans:** The scanf() function is used to read input from the keyboard and store the entered value in variables. Example: int age; scanf("%d", &age);	**2**
B)	Write a C program to calculate the area and perimeter of a rectangle. **Ans:** #include <stdio.h> int main() { float length, breadth, area, perimeter; printf("Enter length and breadth: "); scanf("%f%f", &length, &breadth); area = length * breadth; perimeter = 2 * (length + breadth); printf("Area = %.2f\n", area); printf("Perimeter = %.2f", perimeter); return 0; } Formula: Area = Length × Breadth Perimeter = 2 × (Length + Breadth)	**8**
16		
A)	Explain the while loop. **Ans:** The while loop repeatedly executes a block of statements as long as the given condition is true. Syntax: while(condition) { statements; }	**2**

B)	Write a C program to check whether the given number is positive, negative or zero. **Ans:** #include <stdio.h> int main() { int n; printf("Enter a number: "); scanf("%d", &n); if(n > 0) printf("The number is positive"); else if(n < 0) printf("The number is negative"); else printf("The number is zero"); return 0; }	**8**
17		
A)	What are arithmetic operators? Mention any two arithmetic operators **Ans:** Arithmetic operators are used to perform mathematical operations on values. Examples: + (addition), - (subtraction), * (multiplication), / (division), % (modulus).	**2**
B)	Write a C program to convert temperature in degree Fahrenheit to degree Celsius. **Ans:** #include <stdio.h> int main() { float fahrenheit, celsius; printf("Enter temperature in Fahrenheit: "); scanf("%f", &fahrenheit); celsius = (fahrenheit - 32) * 5 / 9; printf("Temperature in Celsius = %.2f", celsius); return 0; }	**8**